**. Which of the following RxJS operators is used to filter emitted values based on a condition?**

A. map  
B. filter  
C. mergeMap  
D. switchMap

**Answer:** B. filter

**2. What does the ngIf directive in Angular do?**

A. Loops through an array to display each element  
B. Dynamically includes a template based on a condition  
C. Applies styles dynamically  
D. Formats data in a specific way

**Answer:** B. Dynamically includes a template based on a condition

**3. What is the purpose of a pipe in Angular?**

A. To transform input data into a desired format  
B. To define reusable styles  
C. To execute asynchronous code  
D. To handle event binding

**Answer:** A. To transform input data into a desired format

**4. Which RxJS operator is used to transform the emitted data into a new observable?**

A. concatMap  
B. map  
C. take  
D. debounceTime

**Answer:** B. map

**5. How do you create a custom directive in Angular?**

A. By using the @Pipe decorator  
B. By using the @Directive decorator  
C. By creating a new service  
D. By defining a new component

**Answer:** B. By using the @Directive decorator

**1. What is a key difference between template-driven and reactive forms in Angular?**

A. Template-driven forms use TypeScript for validation, while reactive forms use HTML.  
B. Template-driven forms rely on directives, while reactive forms use explicit form control objects.  
C. Reactive forms are less flexible than template-driven forms.  
D. Template-driven forms support dynamic form creation, while reactive forms do not.

**Answer:** B. Template-driven forms rely on directives, while reactive forms use explicit form control objects.

**2. Which Angular module is required to work with forms in an application?**

A. FormsModule  
B. HttpClientModule  
C. ReactiveFormsModule  
D. Both A and C

**Answer:** D. Both A and C

**3. In Angular, which property is used to bind form control values to the template?**

A. [(ngBind)]  
B. [(ngModel)]  
C. [(ngClass)]  
D. [(ngControl)]

**Answer:** B. [(ngModel)]

**4. How do you display a validation error message in Angular forms?**

A. Use the \*ngIf directive to check the control's error state.  
B. Create a custom error-handling service.  
C. Use the ngBind directive.  
D. Handle it programmatically in the TypeScript file.

**Answer:** A. Use the \*ngIf directive to check the control's error state.

**5. What method is used to dynamically add a new form control in a reactive form?**

A. addControl()  
B. pushControl()  
C. appendControl()  
D. addForm()

**Answer:** A. addControl()

**Services and Dependency Injection**

**1. What is the purpose of Angular services?**  
A. To handle user interface interactions  
B. To share reusable logic and data between components  
C. To define custom directives  
D. To manage routing in an application

**Answer:** B. To share reusable logic and data between components

**2. Which decorator is used to define an Angular service?**  
A. @Component  
B. @Injectable  
C. @Directive  
D. @Pipe

**Answer:** B. @Injectable

**3. What is Dependency Injection (DI) in Angular?**  
A. A mechanism to enforce security rules  
B. A pattern to provide dependencies to components or services  
C. A method for handling routing  
D. A way to bind data to templates

**Answer:** B. A pattern to provide dependencies to components or services

**4. How can services be used to share data between two components in Angular?**  
A. By using an Angular service with shared properties or Observables  
B. By passing data through URL parameters  
C. By using template reference variables  
D. By defining static variables in the component

**Answer:** A. By using an Angular service with shared properties or Observables

**Routing and Navigation**

**5. Which module must be imported to set up routing in an Angular application?**  
A. HttpClientModule  
B. RouterModule  
C. FormsModule  
D. ReactiveFormsModule

**Answer:** B. RouterModule

**6. What is a route guard in Angular?**  
A. A feature that optimizes HTTP requests  
B. A mechanism to prevent unauthorized access to routes  
C. A service for handling data binding  
D. A directive for conditional rendering

**Answer:** B. A mechanism to prevent unauthorized access to routes

**7. How can you pass parameters to a route in Angular?**  
A. Using query parameters in the URL  
B. Using the RouterLink directive with routeParams  
C. Using nested routes exclusively  
D. Both A and B

**Answer:** D. Both A and B

**8. What is the purpose of the CanActivate interface in Angular?**  
A. To deactivate a service when not in use  
B. To manage asynchronous operations  
C. To control access to a route before it is activated  
D. To handle error responses in HTTP requests

**Answer:** C. To control access to a route before it is activated

**HTTP Client in Angular**

**9. Which class is used in Angular to make HTTP requests?**  
A. HttpModule  
B. HttpService  
C. HttpClient  
D. HttpProvider

**Answer:** C. HttpClient

**10. What is the primary purpose of Observables in Angular's HTTPClient?**  
A. To synchronize template rendering  
B. To handle asynchronous data streams  
C. To create static configurations  
D. To enforce strict type checking

**Answer:** B. To handle asynchronous data streams